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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,440	12/19/2000	Thomas A. Gregg	POU919980103US1	4913

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EXAMINER	
CASIANO, ANGEL L	
ART UNIT	PAPER NUMBER
2182	7

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/740,440	Applicant(s) GREGG, THOMAS A.	
	Examiner Angel L. Casiano	Art Unit 2182	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The present Office action is in response to Amendment filed 25 September 2003.

2. Claims 1-46 are pending in the application.

Drawings

3. Objection to the Drawings has been overcome with the corrections filed in the present Amendment.

Specification

4. The title of the invention has been amended. Accordingly, previous objection to the Specification has been overcome.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-20 and 41-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright et al. [US 6,195,739 B1] in view of Tarui et al. [US 6,510,496 B1].

Regarding claim 1, Wright et al. teaches a method (see Abstract) for moving data (see col. 8, line 67; col. 14, lines 18-21) between zones (see Fig. 4, "400") of a central processing complex (see col. 7, lines 50-52; col. 13, line 57). The method found in the prior art discloses initiating a move of data from one zone to another in the central processing complex (see col. 9, line 2). The reference also exposes moving the data from one zone to another (see col. 8, line 67; col. 14, lines 18-21) without using a channel interface or processor instructions (see col. 9, lines 40-42; col. 13, lines 19-24; col. 16, lines 13-14). Nonetheless, the cited disclosure does not explicitly teach "dynamically" selecting the zone of the central processing complex. Tarui et al. teaches dynamic selection in a shared resource system (see col. 16, line 53). The method disclosed by Tarui et al. includes a plurality of operation systems (see "OS"; col. 1, lines 48-50). At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to obtain an efficient, low cost (see Tarui et al.; col. 2, lines 7-9) method for moving data. Furthermore, the combination of references would have provided a method capable of performing "fault containment between (logical) partitions" and improving "the system performance" (see Tarui et al.; col. 2, lines 1-5).

As for claim 2, the method disclosed by Wright et al. teaches data including a command (see col. 7, lines 37, 52-53) and data areas.

Regarding claim 3, the cited reference does not explicitly teach "one zone" as an operating system zone or "another zone" as a coupling facility zone. Nonetheless, Wright et al. does teach a method of moving data within zones of a processing complex. It is included in the cited disclosure an operating system zone (see col. 6, lines 28-32) as well as a coupling facility zone (see Fig. 2). Therefore, although the cited prior art does not specify the zones as "one zone" or "another zone", it does teach these zones as involved in the movement of data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to specify two zones involved in the data movement as "operating system" and "coupling facility", since these are disclosed in the prior art as part of the processor complex and therefore involved in the movement.

As for claim 4, Wright et al. teaches movement of data performed by a data mover (see Abstract; col. 8, line 67; col. 14, line 18) located within (see col. 4, line 54) a central processing complex (see Abstract; col. 7, lines 50-51; col. 13, line 57).

As for claim 5, the cited prior art teaches initiation (see col. 13, line 65) of data movement including instructing (see col. 14, line 19) the data mover (see col. 13, line 64; col. 14, line 18) to perform the move (see col. 14, lines 19-20).

As for claim 6, the method in the reference teaches a fetch state machine (inherent, col. 4, lines 60-61; col. 8, line 8; col. 9, line 5; col. 14, lines 19-21) and a store state machine (inherent, col.8, lines 56-60).

As for claim 7, the method found in the prior art teaches determining whether another zone is ready (see col. 10, lines 50-62) and the data movement does not take place until another zone is ready.

As for claim 8, the method in the prior art teaches determining if another zone is ready to receive a command and the movement does not take place until the zone is ready (see col. 10, lines 66-67).

As for claim 9, the method in the reference includes checking a buffer to determine if a zone is ready (see col. 11, lines 2-5).

As for claim 10, the buffer found in Wright et al. is of a data mover (see col. 11, lines 6-9).

As for claim 11, the method in the prior art teaches determining (see col. 10, line 60-62) if another zone is ready (see col. 10, lines 66-67) to receive data areas prior to moving the data.

As for claim 12, the cited prior art teaches determining whether a predefined command (see col. 10, lines 66-67) is received to perform a data move. The receipt of the predefined command (see col. 11, lines 2-5) in the reference indicates that a zone is prepared (see col. 11, lines 6-9) to receive the data.

As for claim 13, the method in Wright et al. teaches fetching data (see col. 4, lines 60-61; col. 8, line 8; col. 9, line 5; col. 10, line 10; col. 14, lines 19-21) from a memory, resulting from fetching requests. It is also disclosed the step of storing the fetched data (see col. 8, lines 56-60) in a memory (see col. 7, lines 55-59) resulting from a store request.

As for claim 14, the cited prior art teaches placing (see col. 9, lines 5-8) the fetched data into a buffer (see col. 9, lines 22-25, 31-33) in response to a store request.

As for claim 15, the cited method teaches fetch memory requests (see col. 9, line 5) generated using retrieved information (see col. 8, lines 9-12). However, the cited art does not teach the information retrieval from an array coupled to the fetch and store state machines. However, the cited prior art discloses the retrieval of information from a zone of the processing complex. Although not coupled to the state machines, the information used for the cited requests is obtained by retrieval from a portion of the processor complex. Therefore, although the exact origin of the retrieval is not disclosed as coupled to the state machines, the method in the prior art does teach the limitation of retrieving information in order to generate the fetching requests.

As for claim 16, the method that Wright et al. teaches includes fetching of data (see col. 8, line 8; col. 10, line 10; col. 14, lines 19-21) and memory processing where the responses are not necessarily in the same order as receipt of requests (see col. 9, lines 57-63).

As for claim 17, the cited method exposes tracking the fetching and storing processes for the data (see col. 4, lines 58-61).

Regarding claim 18, Wright et al. teaches a method of moving data between zones of a central processing complex (see Abstract; Fig. 4, "400"; col. 7, lines 50-52; col. 8, line 67; col. 13, line 57; col. 14, lines 18-21). It is also disclosed in the prior art, the movement of data from one zone of a central processing complex to another (see col. 8, line 67; col. 14, line 18). The disclosed movement exposes creating queue entries associated with a message request (see col. 6, lines 28-30, 39-43, 52-54). The cited method teaches generating fetch memory requests (see col. 9, line 5; col. 14, lines 19-21) for the queue entries to fetch the data from a memory (see col. 6, lines 52-54). The method also discloses using the fetch memory requests to fetch the data from the memory (see col. 4, lines 60-61; col. 8, line 8). The fetched data is placed in a buffer (see col. 9, lines 5-8, 22-25, 31-33). Wright et al. also teaches the step of generating memory requests using the fetched data placed in the buffers (see col. 9, lines 36-42). The method in the reference employs the store memory requests to store the fetched data in a memory of another zone (see col. 8, lines 56-60; col. 9, lines 1-8). However, Wright et al. does not explicitly teach "dynamically" selecting the zone of the central processing complex. Instead, Tarui et al. teaches dynamic selection in a shared resource system (see col. 16, line 53). The method disclosed by Tarui et al. includes a plurality of operation systems (see "OS"; col. 1, lines 48-50). At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to obtain an efficient, low cost (see Tarui et al.; col. 2, lines 7-9) method for moving data. In addition, the combination of references would have provided a method capable

of performing "fault containment between (logical) partitions" and improving "the system performance" (see Tarui et al.; col. 2, lines 1-5).

As for claim 19, Wright et al. teaches a method including moving data by a data mover (see Abstract; col. 14, line 18) located within a central processing complex.

As for claim 20, the method that Wright et al. teaches discloses a data mover (see col. 14, lines 18-21) including control logic to create a queue memory to perform the generation of fetching requests (see col. 9, lines 3-8) and to place the fetched data in a buffer (see col. 9, lines 24-25, 31-33).

Regarding claim 41, Wright et al. teaches a system of moving data (see col. 8, line 67; col. 14, lines 18-21). The data movement is performed between zones of a processing complex (see col. 7, lines 50-52; col. 13, line 57). The cited reference discloses a data mover (see Abstract; col. 8, line 67; col. 14, line 68) to perform the claimed method without using a channel interface (see col. 9, lines 40-42) and without processor instructions (see col. 13, lines 19-24). Wright et al. does not expressly teach "dynamically" selecting the zone of the central processing complex. Nonetheless, Tarui et al. discloses dynamic selection for a shared resource system (see col. 16, line 53). The method disclosed by Tarui et al. includes a plurality of operation systems (see "OS"; col. 1, lines 48-50). At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to obtain an efficient, low cost

(see Tarui et al.; col. 2, lines 7-9) method for moving data. The combination of references would have further provided a method capable of performing "fault containment between (logical) partitions" and improving "the system performance" (see Tarui et al.; col. 2, lines 1-5).

As for claim 42, the cited system does not explicitly teach "one zone" as an operating system zone and "another zone" as a coupling facility zone. Nonetheless, Wright et al. does teach a system of moving data within zones of a processing complex. It is included in the cited disclosure an operating system zone (see col. 6, lines 28-32) as well as a coupling facility zone (see Fig. 2). Therefore, although the cited prior art does not specify the zones as "one zone" or "another zone", it does teach these zones as involved in the movement of data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to specify two zones involved in the data movement as "operating system" and "coupling facility", since these are disclosed in the prior art as part of the processor complex and are therefore involved in the movement of data.

As for claim 43, the system in the reference teaches a fetch state machine (inherent, col. 4, lines 60-61; col. 8, line 8; col. 9, line 5; col. 14, lines 19-21) and a store state machine (inherent, col.8, lines 56-60).

As for claim 44, the system in Wright et al. teaches fetching data (see col. 4, lines 60-61; col. 10, line 10; col. 14, lines 19-21) from a memory, resulting from fetching requests. It is also

disclosed the storage of the fetched data (see col. 8, lines 56-60) in a memory (see col. 7, lines 55-59) resulting from a store request.

As for claim 45, the cited prior art teaches holding (see col. 9, lines 5-8) the fetched data in a buffer (see col. 9, lines 22-25, 31-33) in response to a store request.

Regarding claim 46, Wright et al. teaches a system of moving data between zones of a central processing complex (see Abstract; Fig. 4, "400"; col. 7, lines 50-52; col. 8, line 67; col. 13, line 57; col. 14, lines 18-21). It is also disclosed in the prior art, the movement of data from one zone of a central processing complex to another by a data mover (see col. 8, line 67; col. 14, line 18). The disclosed movement exposes queue entries associated with a message request (see col. 6, lines 28-30, 39-43, 52-54). The cited system teaches generating fetch memory requests (see col. 9, line 5; col. 14, lines 19-21) for the queue entries to fetch the data from a memory (see col. 6, lines 52-54). The system also discloses using the fetch memory requests to fetch the data from the memory (see col. 4, lines 60-61; col. 8, line 8). The fetched data is placed in a buffer (see col. 9, lines 5-8, 22-25, 31-33; col. 11, lines 2-9). The prior art includes a state machine to store the data moved (see col. 8, lines 56-60). Wright et al. also teaches generating memory requests using the fetched data placed in the buffers (see col. 9, lines 36-42). The system in the reference employs the store memory requests to store the fetched data in a memory of another zone (see col. 8, lines 56-60; col. 9, lines 1-8). However, Wright et al. does not explicitly teach "dynamically" selecting the zone of the central processing complex. Tarui et al. teaches dynamic selection in a shared resource system (see col. 16, line 53). The method disclosed by Tarui et al.

includes a plurality of operation systems (see "OS"; col. 1, lines 48-50). At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to obtain an efficient, low cost (see Tarui et al.; col. 2, lines 7-9) method for moving data. In addition, the combination of references would have provided a method capable of performing "fault containment between (logical) partitions" and improving "the system performance" (see Tarui et al.; col. 2, lines 1-5).

7. Claims 21-37 correspond to the system for the implementation of the method disclosed in claims 1-17. The combination of references, as exposed previously, teaches the limitations corresponding to the method of moving data between zones of a central processing complex. The present claims are therefore rejected under the same rationale.

8. Claims 38-40 correspond to the system for the implementation of the method disclosed in claims 18-20. The combination of references, as exposed in previous rejections, teaches the limitations corresponding to the method of moving data between zones of a central processing complex. The claims directed to the system are therefore rejected under the same rationale.

Response to Arguments

9. Applicant's arguments with respect to claims 1-46 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel L. Casiano whose telephone number is 703-305-8301. The examiner can normally be reached on 8:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

alc
29 December 2003

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100